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TRIODE-PENTODE CONVERTER

9-PIN MINIATURE TYPE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage	6.3	ac or dc volts
Current	0.45	amp

Direct Interelectrode Capacitances:

	Without External Shield	With External Shield°	
Triode Unit:			
Grid to plate	1.5	1.5	μμf
Grid to cathode & pentode grid No.3, and heater	2.6	3	μμf
Plate to cathode & pentode grid No.3, and heater	0.05	1	μμf
Pentode Unit:			
Grid No.1 to plate	0.03 max.	0.016 max.	μμf
Grid No.1 to cathode & grid No.3, grid No.2, and heater	4.8	5	μμf
Plate to cathode & grid No.3, grid No.2, and heater	0.9	1.6	μμf
Pentode grid No.1 to triode plate	0.05 max.	0.04 max.	μμf
Pentode plate to triode plate	0.05 max.	0.007 max.	μμf
Heater to cathode	5.5	5.5●	μμf

Characteristics:

	Triode Unit	Pentode Unit	
Plate-Supply Voltage	100	250	volts
Grid-No.2 Supply Voltage	–	150	volts
Cathode Resistor	100	200	ohms
Amplification Factor	40	–	
Plate Resistance (Approx.)	6900	750000	ohms
Transconductance	5800	4600	μmhos
Plate Current	8.5	7.7	ma
Grid-No.2 Current	–	1.6	ma
Grid-No.1 Voltage (Approx.) for plate current of 10 μamp	-10	-10	volts

° With external shield JETEC No.315 connected to cathode except as noted.

● With external shield JETEC No.315 connected to ground.

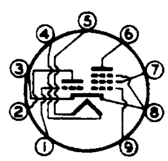
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TRIODE-PENTODE CONVERTER

Mechanical:

Mounting Position . . . . Any
Maximum Overall Length . . . . 2-3/16"
Maximum Seated Length . . . . 1-15/16"
Length, Base Seat to Bulb Top (Excluding tip) . . 1-9/16" ± 3/32"
Maximum Diameter . . . . 7/8"
Dimensional Outline . . . . *See General Section*
Bulb T-6-1/2
Base . . . . Small-Button Noval 9-Pin (JETEC No. E9-1)
Basing Designation for BOTTOM VIEW 9GF

Pin 1 - Triode Grid
Pin 2 - Triode Plate
Pin 3 - Cathode
Pin 4 - Heater
Pin 5 - Heater
Pin 6 - Pentode Plate



Pin 7 - Pentode Grid No. 2
Pin 8 - Pentode Grid No. 3, Cathode
Pin 9 - Pentode Grid No. 1

CONVERTER SERVICE

Maximum Ratings, *Design-Center Values:*

	Triode Unit as Osc.	*Pentode Unit as Mixer*	
PLATE VOLTAGE	250 max.	250 max.	volts
GRID-No. 2 (SCREEN-GRID) SUPPLY VOLTAGE	-	250 max.	volts
GRID-No. 2 VOLTAGE	-	*See Grid-No. 2 Input Rating Chart at front of Receiving Tube Section*	
GRID-No. 1 (CONTROL-GRID) VOLTAGE:			
Negative bias value . . .	40 max.	40 max.	volts
Positive bias value . . .	0 max.	0 max.	volts
PLATE DISSIPATION	1.5 max.	2 max.	watts
GRID-No. 2 INPUT:			
For grid-No. 2 voltages up to 150 volts	-	0.5 max.	watt
For grid-No. 2 voltages between 150 and 300 volts	-	*See Grid-No. 2 Input Rating Chart at front of Receiving Tube Section*	
GRID-No. 1 INPUT	0.5 max.	-	watt
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode . .	200 max.	200 max.	volts
Heater positive with respect to cathode . .	200▲ max.	200▲ max.	volts

▲ The dc component must not exceed 100 volts.

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TRIODE-PENTODE CONVERTER

Typical Operation:

	Triode Unit as 250-Mc Osc.●	*Pentode Unit as Mixer**	
Plate Voltage	150	150	volts
Grid-No.2 Voltage	–	150	volts
Mixer Grid-No.1 Supply Voltage	–	-3.5	volts
Oscillator Voltage (rms) at Mixer Grid No.1	–	2.6	volts
Mixer Grid-No.1-Circuit Resistance	–	120000	ohms
Oscillator Grid Resistor	2700	–	ohms
Conversion Transconductance	–	2100	μmhos
Plate Current	13	6.2	ma
Grid-No.2 Current	–	1.8	ma
Grid Current	3.6	–	ma
Grid-No.1 Current	–	2	μamp
Oscillator Power Output (Approx.)	0.5	–	watt

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For fixed-bias operation	0.1 max.	megohm
For cathode-bias operation	0.5 max.	megohm

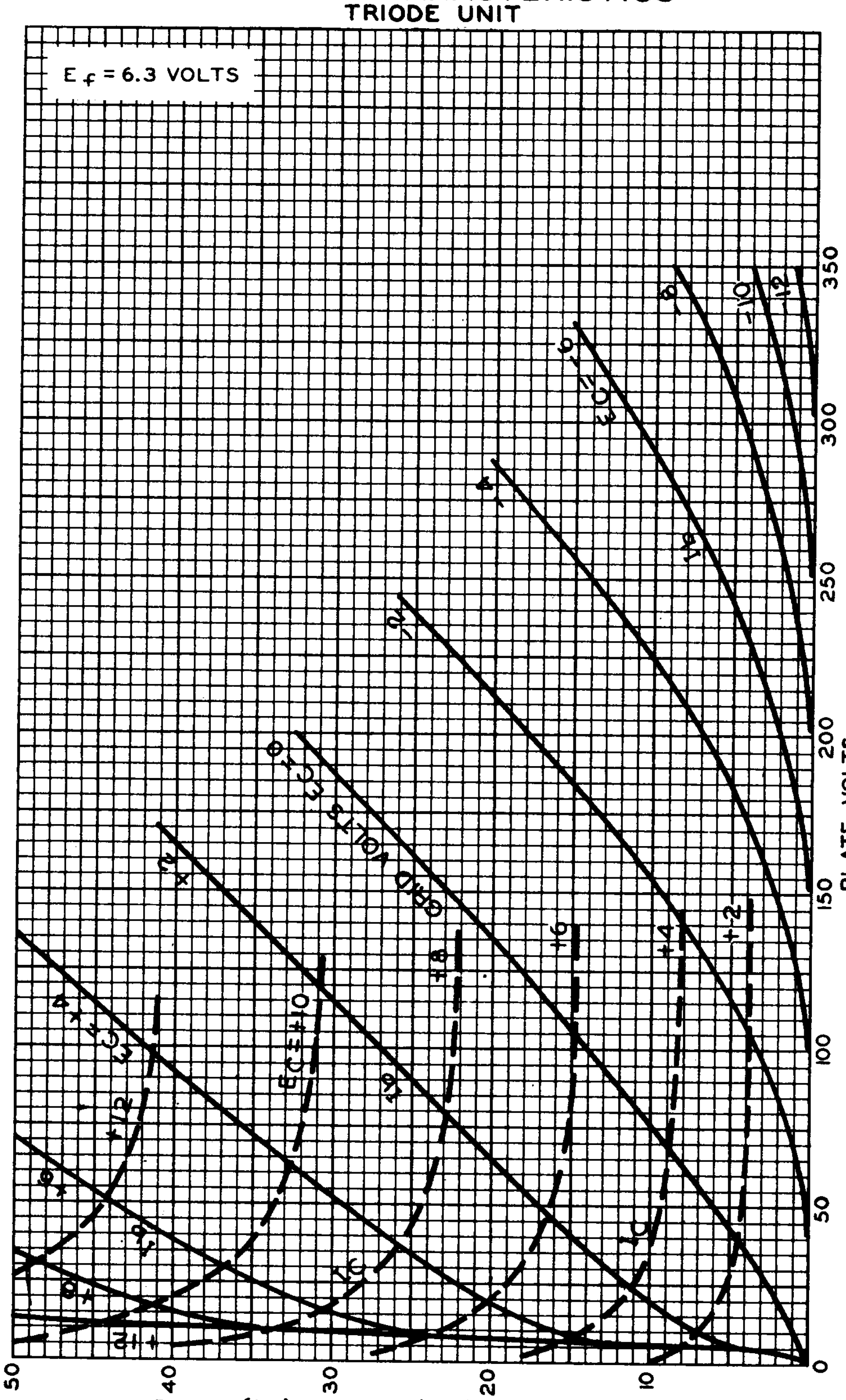
● In TV or FM receivers, it is generally desirable to operate the oscillator with less power input than shown in the tabulated data in order to avoid over-excitation and excessive oscillator radiation.

* With separate excitation and triode unit connected to ground.

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AVERAGE CHARACTERISTICS
TRIODE UNIT



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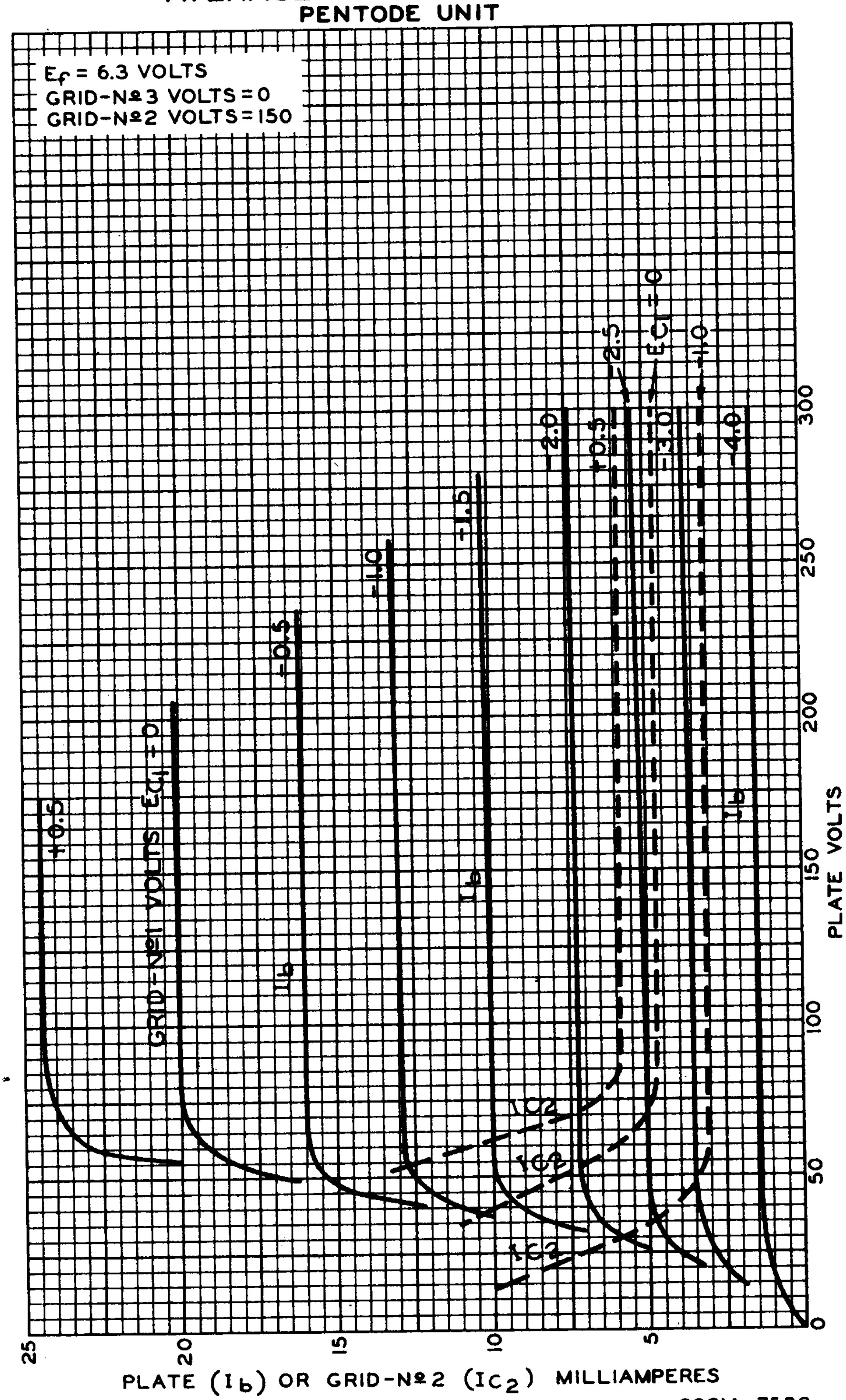
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AVERAGE CHARACTERISTICS
PENTODE UNIT



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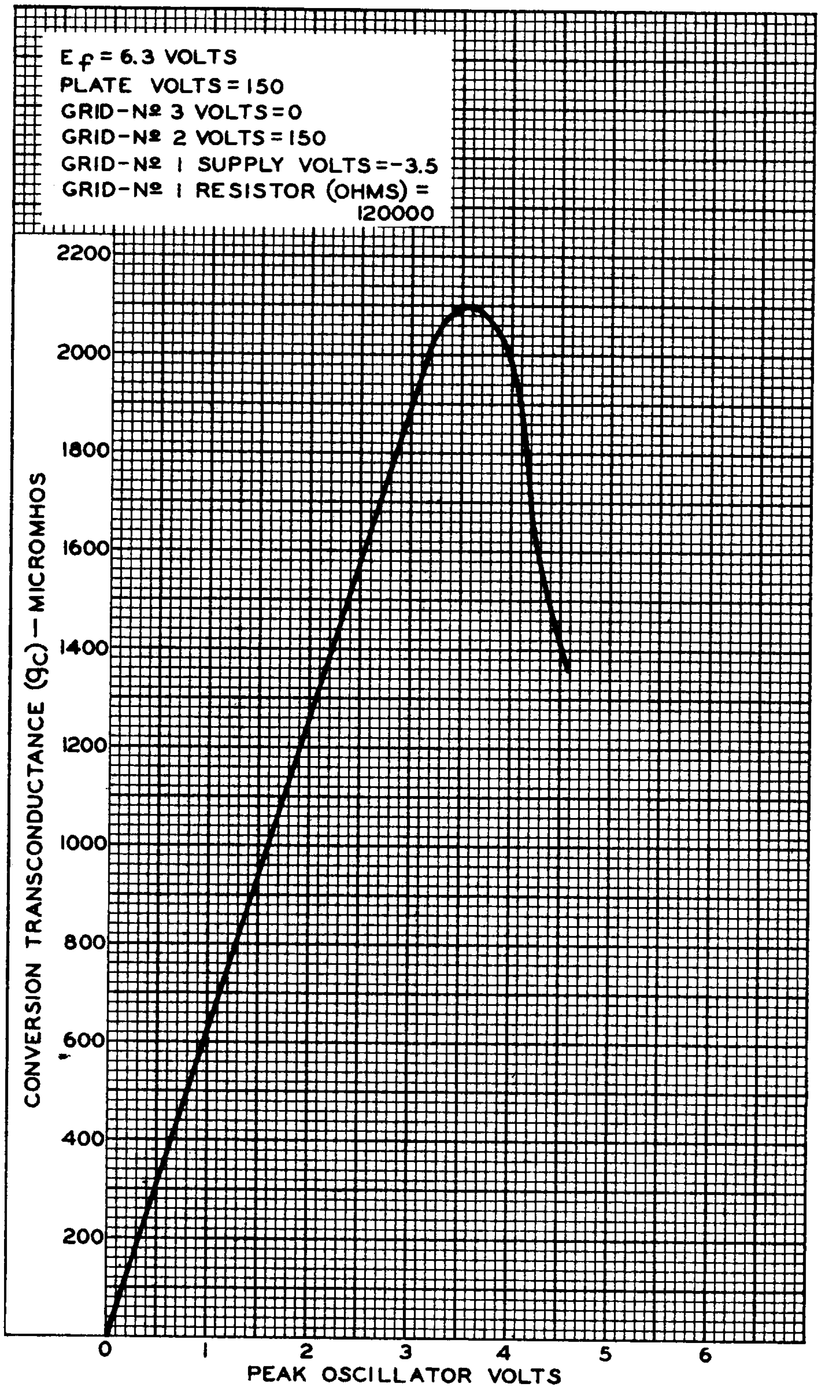
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OPERATION CHARACTERISTIC
WITH SEPARATE OSCILLATOR EXCITATION
PENTODE UNIT



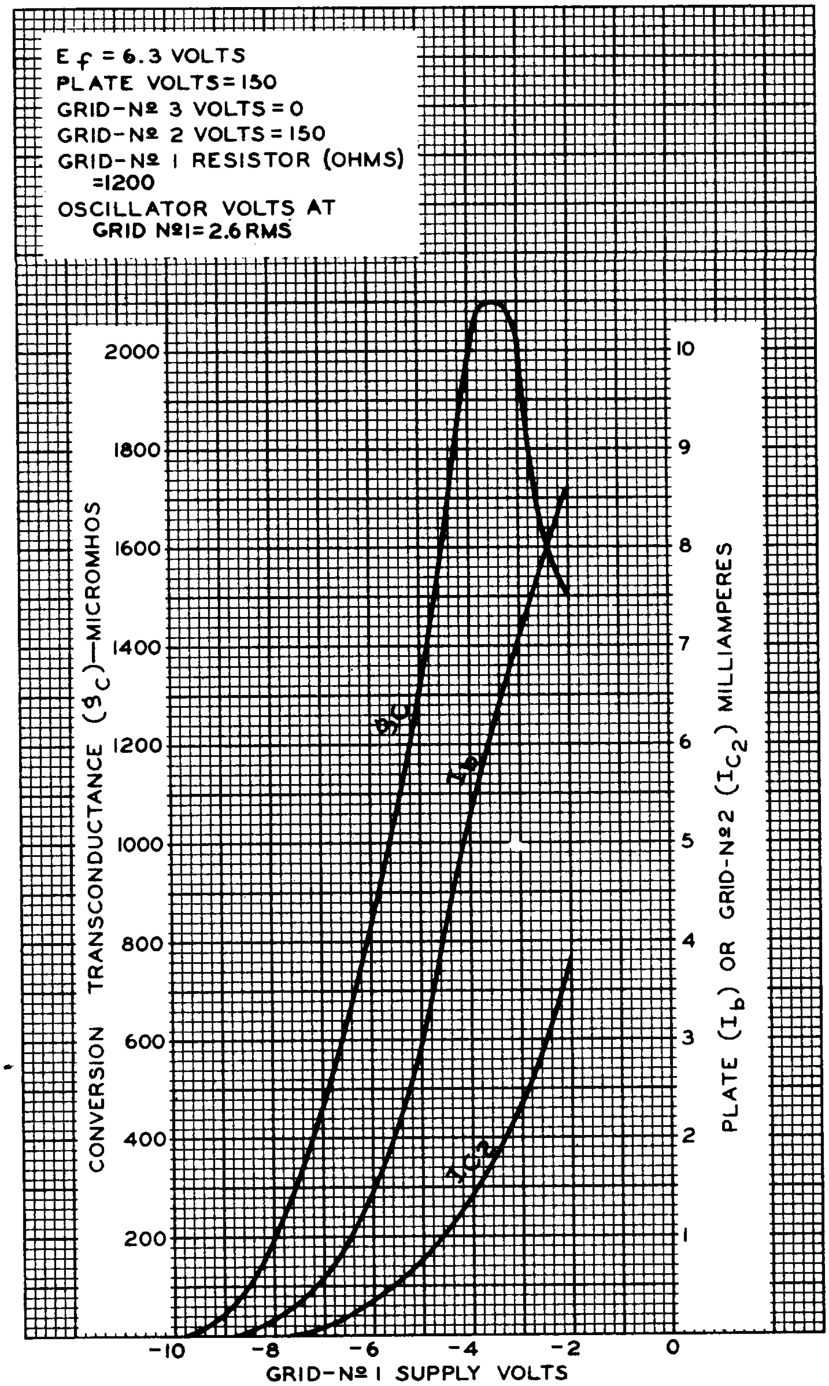
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OPERATION CHARACTERISTICS
WITH SEPARATE OSCILLATOR EXCITATION
PENTODE UNIT



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